

Keweenaw Bay Indian Community Strategic Timber Harvesting Plan

*** FY 2005-2010 ***



Prepared for

**United States Department of the Interior
Bureau of Indian Affairs**

&

Keweenaw Bay Indian Community

Prepared by

**Jeff Kitchens
Michigan Agency Forester**

INTRODUCTION & PURPOSE

The Keweenaw Bay Indian Community (KBIC) has three areas of land, the L'anse Reservation in Baraga, MI, the Marquette Casino located on a parcel of land in Marquette County, MI, and both tribal and allotted lands scattered throughout Ontonagon county. The L'Anse Reservation was created by the Treaty of 1854. Originally composed of 54,664 acres, most of this acreage was allotted to individuals. By 1910, most of the commercial timber had been cut, and many areas were exposed to extensive wildland fires. Currently KBIC has 14,735.48 acres of trust land (22 in Marquette and 600 in Ontonagon) and over 3,500 acres of fee lands, many of which are in application for trust. Approximately 85% of the total acreage is forested.

In 1976, the BIA-Michigan Agency was created in Sault Ste. Marie, MI. Prior to that, forestry activities were coordinated from the Great Lakes Agency, in Ashland, Wisconsin. Until 1991, the Baraga Field Office consisted of a forester, forest technician, clerk/typist, and two conservation officers. Since then, federal budget cuts have reduced the office staff to only that of the forester and a fuels technician. In the mid 1990s KBIC received federal funding to contract the development of a Forest Management Plan (FMP) with Michigan Technological University, School of Forestry. Final approval of the plan was achieved in April 1997. The plan was composed of an inventory analysis, forest resource protection plan, forest benefits economic analysis, and a timber management program implementation plan.

According to the Timber Management Program Implementation Plan for the Keweenaw Bay Indian Community (KBIC), final revision 1996, it is the goal of the tribe to maintain and enhance health, productivity, and diversity of its forest land holdings while producing revenue and employment opportunities for tribal members by harvesting wood products and providing for recreation opportunities. According to records attained from the Bureau of Indian Affairs (BIA) Michigan Agency Forestry Office, from 1990 to 2004 1,980 acres were harvested for a total volume of 17,682.08mbf (see table 1 below). Of the total acres treated, 850 were tribal trust, whereas 1,130 were allotments held in trust. The total value of timber sales completed from 1990 to 2004 was \$682,688.61.

Table 1: Acreage, volumes, and values of contracted timber sales at KBIC from 1990 to 2004.

Year*	Total Tribal Trust Acres	Total Tribal Trust Volume	Total Tribal Trust Value	Total Allotment Trust Acres	Total Allotment Trust Volume	Total Allotment Trust Value	Total Trust Acres	Total Trust Volume	Total Trust Value
1990	120	106.77mbf	\$11,299.80				120	106.77mbf	\$11,299.80
1991	80	196.39mbf	\$2,803.45				80	196.39mbf	\$2,803.45
1992	120	349.87mbf	\$4460.23				120	349.87mbf	\$4,460.23
1993	160	1412.29mbf	\$26,514.72				160	1412.29mbf	\$26,514.72
1994				40	774.00mbf	\$21,162.24	40	774.00mbf	\$21,162.24
1995	40	248.88mbf	\$8,733.12	80	800.37mbf	\$23,773.19	120	1049.25mbf	\$32,506.31
1996**							0	0.00mbf	\$0.00
1997	80	1274.14mbf	\$44,647.28	80	729.36mbf	\$20,169.31	160	2003.50mbf	\$64,816.59
1998				80	173.45mbf	\$11,892.88	80	173.45mbf	\$11,892.88
1999	120	588.70mbf	\$15,195.85	80	827.33mbf	\$21,588.49	200	1416.03mbf	\$36,784.34
2000				440	4,719.60mbf	\$196,610.83	440	4,719.60mbf	\$196,610.83
2001	130	976.87mbf	\$51,541.99	80	1,087.56mbf	\$38,412.51	210	2064.43mbf	\$89,954.50
2002**							0	0.00mbf	\$0.00
2003				120	2,206.07mbf	\$122,360.52	120	2,206.07mbf	\$122,360.52
2004				130	1,210.43mbf	\$61,522.20	130	1,210.43mbf	\$61,522.20
14 Year Average	60	368.14mbf	\$11,799.75	80	894.87mbf	\$36,963.73	140	1,263.01mbf	\$48,763.47
Total	850	5,153.91mbf	\$165,196.44	1,130	12,528.17mbf	\$517,492.17	1,980	17,682.08mbf	\$682,688.61

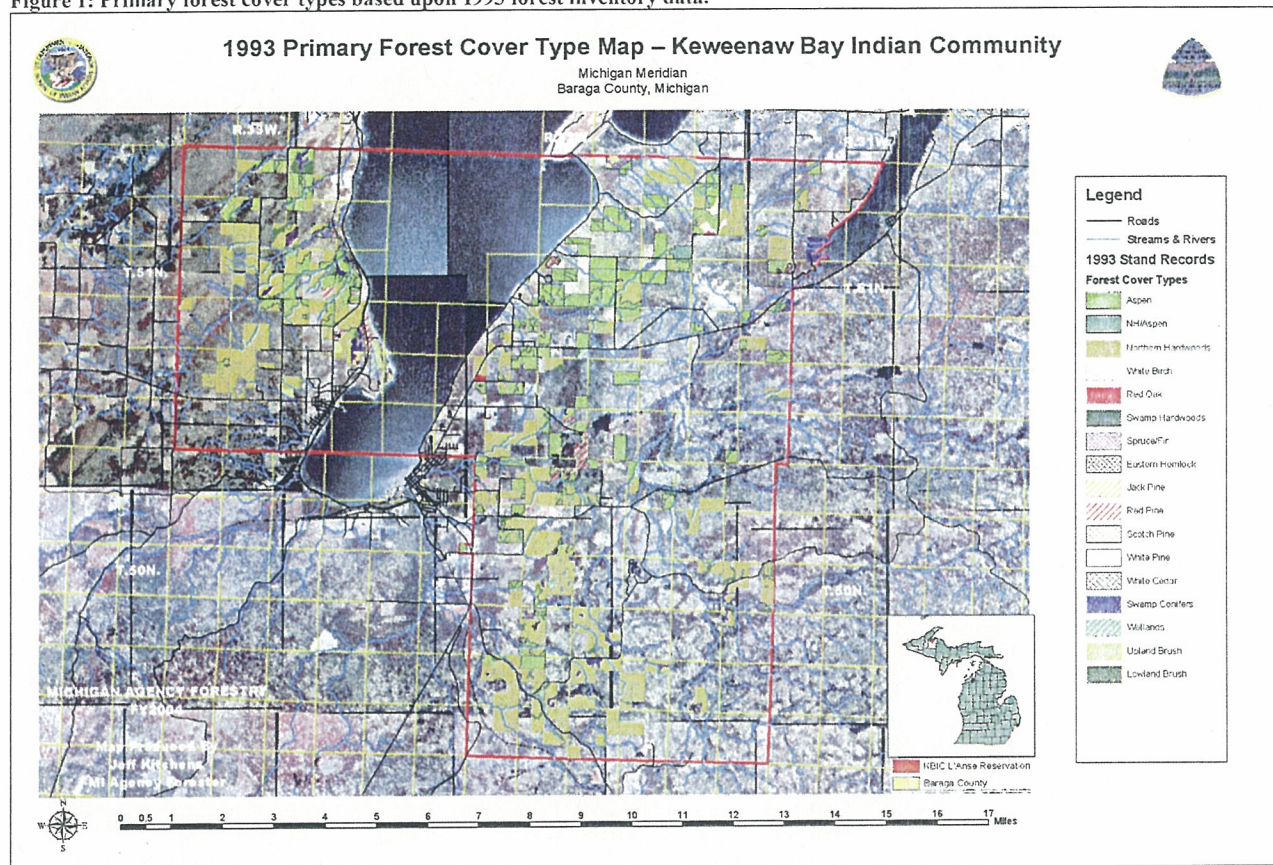
*: Year was determined by the date on the report for timber cut for each individual timber sale contract. This does not necessarily show an accurate distribution of harvested volumes and values/year.

**: Although 1996 and 2002 show zero values for column totals, products were being harvested during these years. However, no reports of timber cut were completed or sales closed during those years.

From 1991 through 1993 a stand exam inventory of KBIC forested trust lands was conducted to determine volume, value, and diversity of timber resources within the reservation. Valuable information in regards to priority of timber

related activities (e.g. thinning, timber sale, planting, etc.) and suggestions toward silvicultural prescriptions was collected and eventually inputted into a digital database (see figure 1 below). According to this data, of the 13,934 acres of commercial timber present in 1993 68% (9,501 acres) were considered at high risk, overstocked, or mature and ready for a commercial cut. Fifty-two percent (7,252 acres) of commercial timber acreage was identified as a priority 1 by the 1991-1993 stand exam data (see figure 2 below).

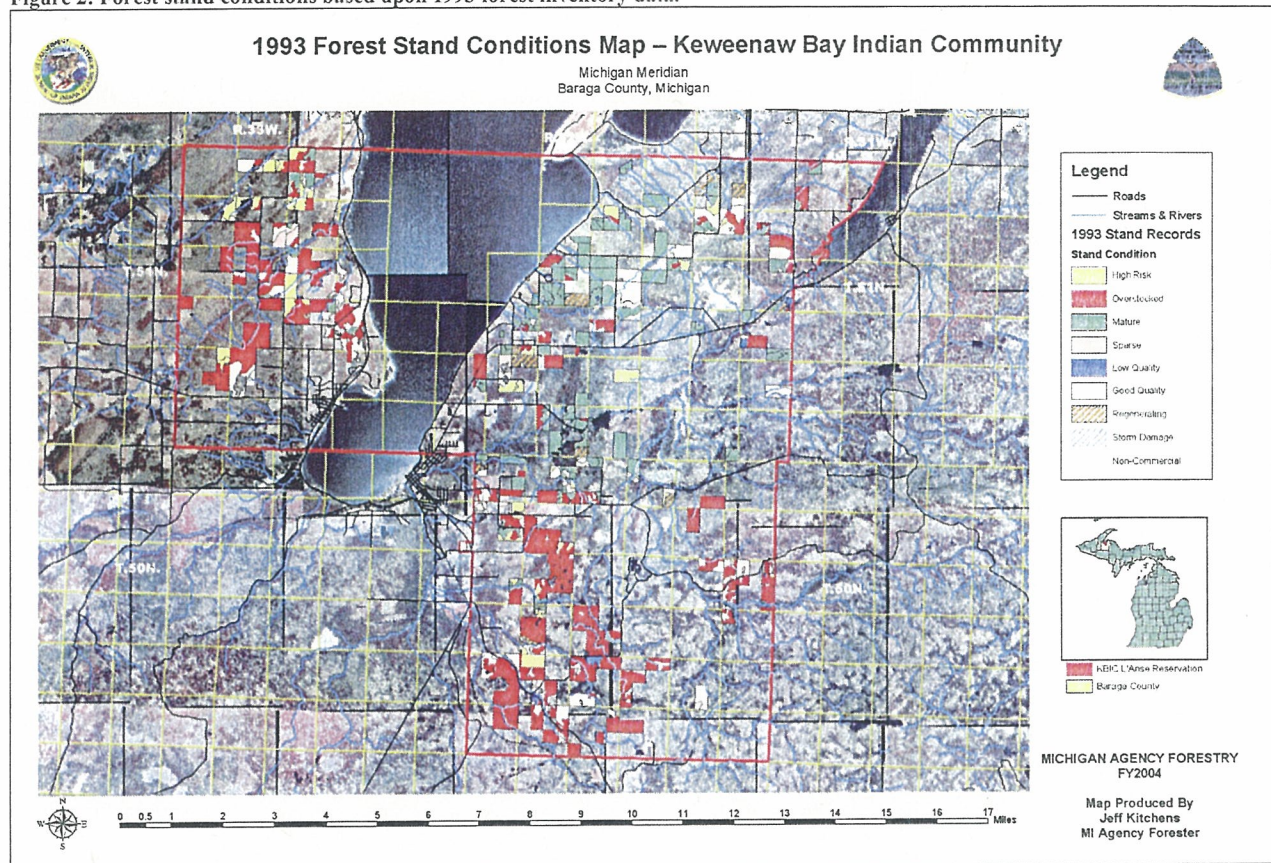
Figure 1: Primary forest cover types based upon 1993 forest inventory data.



Another important issue was the fact that around 4,000 acres were considered high-risk or mature aspen (*P. tremuloides* and *P. grandidentata*). These were stands with a significant component of mature to overmature aspen, greater than 50 years old, of which most had begun to decline and would no longer be merchantable in the next 10 to 20 years. A recent aspen sale on KBIC lands grossed a total of \$26,851 from the aspen component alone, which covered an estimated 43 acres. Based upon the above numbers there is a high risk that KBIC tribal members and heirs to Allotments within the KBIC reservation could lose \$1 to \$2 million from aspen not commercially harvested prior to its decline.

Aspen is not the only commercial product at risk. Over two thousand acres of mixed northern hardwood were identified as needing some sort of treatment. Most of these stands identified were considered ready for a commercial, as opposed to a precommercial or timber stand improvement thinning. Although accurate numbers are not available for determining the total volumes and subsequent values from loss of merchantable northern hardwood timber due to overstocked stands and decline, it is conceivable that dollar amounts would be equal, if not more, to the money lost from unharvested declining aspen.

Figure 2: Forest stand conditions based upon 1993 forest inventory data.



Given the information presented above it is clear that something needs to be done to better manage KBIC's timber resource and increase harvesting rates. If average timber harvesting activities remain the same it will take at least 40 years to complete the harvesting of all priority one stands within forested trust lands on the KBIC reservation and over 50 years to bring all overmature, mature, and high-risk stands into healthier more productive conditions (e.g. to have them meet their silvicultural goals).

Currently the calculated annual allowable cut (AAC) for commercial timberland on the L'Anse reservation is 3,000mbf. However, the AAC has only been met once in the last 14 years. About 140 to 160 acres on average are cut annually resulting in volumes much lower than the AAC. This plan suggests that the 400 to 500 acres/year need to be treated to reduce the backlog of commercial timber needing to be harvested. Along with this the AAC for the KBIC L'Anse Reservation should be increased from 3,000mbf to over 4,000mbf. The accelerated cut program should reduce the number of years it would take to cut priority 1 stands from 40 years to less than 20.

The objectives of the following plan are to:

1. Catch the value of declining forest stands
2. Reduce the backlog of acres not harvested to meet the AAC.
3. Increase overall forest health and productivity
4. Increase timber sale preparation and administration efficiency
5. Increase tribal involvement and education in regards to the timber management program on the L'Anse Reservation of the Keweenaw Bay Indian Community.

This plan is not a forest management plan and in no way does it replace the current forest management plan. It is simply a strategic timber harvesting plan aimed at meeting the guidelines, goals, and objectives outlined by the current KBIC forest management plan. This plan does not account for forest development projects such as timber stand improvement projects (TSI) and plantings.

TIMBER HARVESTING PLAN

The following five sections identify harvesting schedules/plans on an annual basis for 2005 through 2010. Table 2 summarizes these sections. Dates for both setup and harvest cover two-year rather than one-year periods. This was done to account for possible changes in the harvest schedule as well as time lags that often occur between the time a timber sale is sold and actually cut. Acres listed in table 2 are not necessarily the final number of acres to be treated in a timber sale. These acres do not account for non-forested areas and wetlands, buffers around waterways and roads, and areas of non-merchantable timber. The actual acreage to be treated in a single timber sale may be much less than is currently listed in table 2.

Three different forestry prescriptions are suggested in table 2; hardwood thinning, aspen clearcut, and aspen removal. They are described below.

- **Hardwood Thinning:** Individual hardwood trees are marked throughout a stand for removal. Most trees are marked because of defect, presence of disease, are at risk from declining, are mature or overmature, and/or because they will allow healthier, more vital trees to grow better. This is in no way like a clearcut.
- **Aspen Clearcut:** Aspen is an interesting species in that it can reproduce from seed, but also from small buds (sprouts) located on the roots. What is even more interesting is that aspen trees in an aspen stand are not "individuals", but all part of the same root system. Most often aspen does not regenerate well enough from seeds to maintain a population. However, aspen does very well when the overstory is removed. The biology and physiology of this is complicated, but basically aspen stores a great deal of energy in its roots. When the overstory is killed, that energy is used to initiate the growth of its root sprouts and perpetuate new trees. Because aspen roots are all connected, the removal of a few individual trees does not create enough of an energy release to start all the new individuals growing. Therefore, to successfully restock/regenerate a dying, mature aspen stand, the best way is to kill off the overstory and allow the roots (which remain alive) to grow the next generation of trees. Aspen clearcuts are good for wildlife, especially woodcock, which is a species noted as declining in the Upper Peninsula.
- **Aspen Removal:** Taking into account what was said above, sometimes it is not prudent to clearcut whole aspen stands. This is especially true when an aspen stand has transitioned to a mixed hardwood stand. Once an aspen stand has become a mixed hardwood stand it can be hard to maintain the aspen component. In a case like this it is best to cut down and remove all mature aspen so as to catch their economic value, while leaving behind young and intermediate aged individuals. However, in some cases small 5-acre clearcuts within an established hardwood stand can rejuvenate patches of aspen, thus preserving the aspen component, while maintaining most of the established hardwoods.

All proposed timber sales will comply with the KBIC Forest Management Plan, BIA CFR 25, Best Management Practices (as outlined in both Michigan and Wisconsin forest management guidelines), and NEPA. All sales proposed in sections 2-5 will require archeological surveys in the form of shovel tests prior to advertisement. These tests will be coordinated through the BIA MI Agency forestry office. However, the MI Agency forestry office will be required to work directly with the KBIC tribal historical preservation office (THPO) in the planning of all archeological surveys. The SHPO will also be consulted with prior to advertising any timber sale described below. The KBIC cultural resource committee has already been consulted regarding this plan and will be further included as the planning processes continue. If any cultural resources are encountered during a timber sale, all operations will be closed down until further consultation from KBIC and SHPO representatives is acquired.

Natural, like cultural, resources will also be monitored and protected. Wetlands and waterways will be protected through the use of Best Management Practices (BMPs) and buffers of approximately 100ft on either side of the lake, river, or stream. However, some buffers may be adapted to best match the local topography (e.g. be increased to cover an entire drainage or wet area). All water quality monitoring by the KBIC Natural Resources Department (NRD) will be supported and encouraged. For all timber sales, conifers such as hemlock, white pine, cedar, and spruce, which can provide valuable wildlife habitat, will be maintained at appropriate stocking levels regardless of the prescription. Oak, given its high cultural and resource value, will also be protected and favored on all sites. The USF&W will be consulted in regards to all planned timber sales. Furthermore, the KBIC NRD office will be notified prior to the start of any and all harvesting activities.

Logging operations will be restricted to dry and/or frozen ground and rutting will not be permitted. No new roads will be established and all routes maintained for trucks and other heavy equipment will be closed upon completion

of harvesting activities. Aesthetics will be taken into account on all timber sales. Buffers of approximately 300ft will be used along well-traveled roadways and high-use recreations areas (e.g. ski trails). However, in areas where stand densities may not be high, buffers may be increased so as to prevent unwanted visual disruptions.

All timber sales approved on tribal trust lands, which are not allotted to individual heirs, will only be open to contractors who are certified as tribal business according to the regulations established by KBIC. All timber sales approved on Allotments in trust will be subject to open market bidding processes.

Table 2: A five-year summary of commercial timber sale projects on the KBIC L'Anse Reservation.

Unit Name	Ownership	Legal Description	Est. Acres	Comp(s)	Stand(s)	Prescription	Setup	Harvest
SECTION 1								
Herman Blowdown	Tribal	E ½ NW ¼ Sec35 T50N R33W	80	308	42, 43, 44 45, 46, 47	Hardwood Thinning	FY04-05	FY05-06
Charles Picore	Allotment	NE ¼ SW ¼ Sec 3 T50N R33W	40	306	856	Aspen Clearcut & Hardwood Thinning	FY04-05	FY05-06
Haataja Road Allotments*	Allotment	S ½ NW ¼ Sec 16 T51N R32	240	305	807 806 820-824	Aspen Clearcut & Hardwood Thinning	FY04-05	FY05-06
SECTION 2								
Dault's Creek 1	Tribal	E ½ NW ¼ Sec 27 T50N R33W	80	308	1, 2, 3 4, 5	Hardwood Thinning & Aspen Clearcut	FY05-06	FY06-07
Herman Road 1	Tribal	NE ¼ SE ¼ Sec 27 T 50N R33W	40	308	8, 9, 11	Hardwood Thinning	FY05-06	FY06-07
North Beartown Road Allotments**	Allotments	W ½ Sec 4 & N ½ NW ¼ T51N R33W	400	302	801 – 819, omit 814	Aspen Clearcut & Hardwood Thinning	FY05-06	FY06-07
SECTION 3								
Dault's Creek 2	Tribal	W ½ NE ¼ Sec 27 T50N R33W	80	308	2, 4, 6, 7	Hardwood Thinning & Aspen Clearcut	FY06-07	FY07-08
Herman Road 2	Tribal	SE ¼ SE ¼ Sec 27 T 50N R33W	40	308	8, 9, 11	Hardwood Thinning	FY06-07	FY07-08
Dynamite Hill Road Allotments***	Allotments	NW ¼ Sec 10 & S ½ SE ¼ Sec 3 T50N R33W	240	306 & 307	904, 905 912 801-807	Aspen Removal & Hardwood Thinning	FY06-07	FY07-08
SECTION 4								
Dault's Creek 3	Tribal	E ½ NE ¼ Sec27 T50N R33W	80	308	6, 8, 58	Hardwood Thinning & Aspen Clearcut	FY07-08	FY08-09
Herman Road 3	Tribal	SE ¼ SE ¼ Sec 27 T 50N R33W	40	308	8, 9, 11	Hardwood Thinning	FY07-08	FY08-09
Linden Creek Allotments****	Allotments	Sec 1 & 2 T50N	240	306	865-888	Aspen Clearcut & Hardwood Thinning	FY07-08	FY08-09
SECTION 5								
Industrial Park Tribal	Tribal	NW ¼ Sec 29 T51N R33W	240	301	14, 15 16	Hardwood Removal For Development	FY08-09	FY09-10
Herman Road 4	Tribal	SW ¼ SW ¼ Sec36 T50N R33W	40	308	55, 56	Hardwood Thinning	FY08-09	FY09-10
Pikes Peak Road Allotments*****	Allotments	Sec 10 & 15 T51N R32W	240	303 & 304	814 818, 819 820, 830	Aspen Clearcut & Hardwood Thinning	FY08-09	FY09-10
Total:			2,120					

* (Mary Cardinal, Charlotte Pine, & Helen Funke)

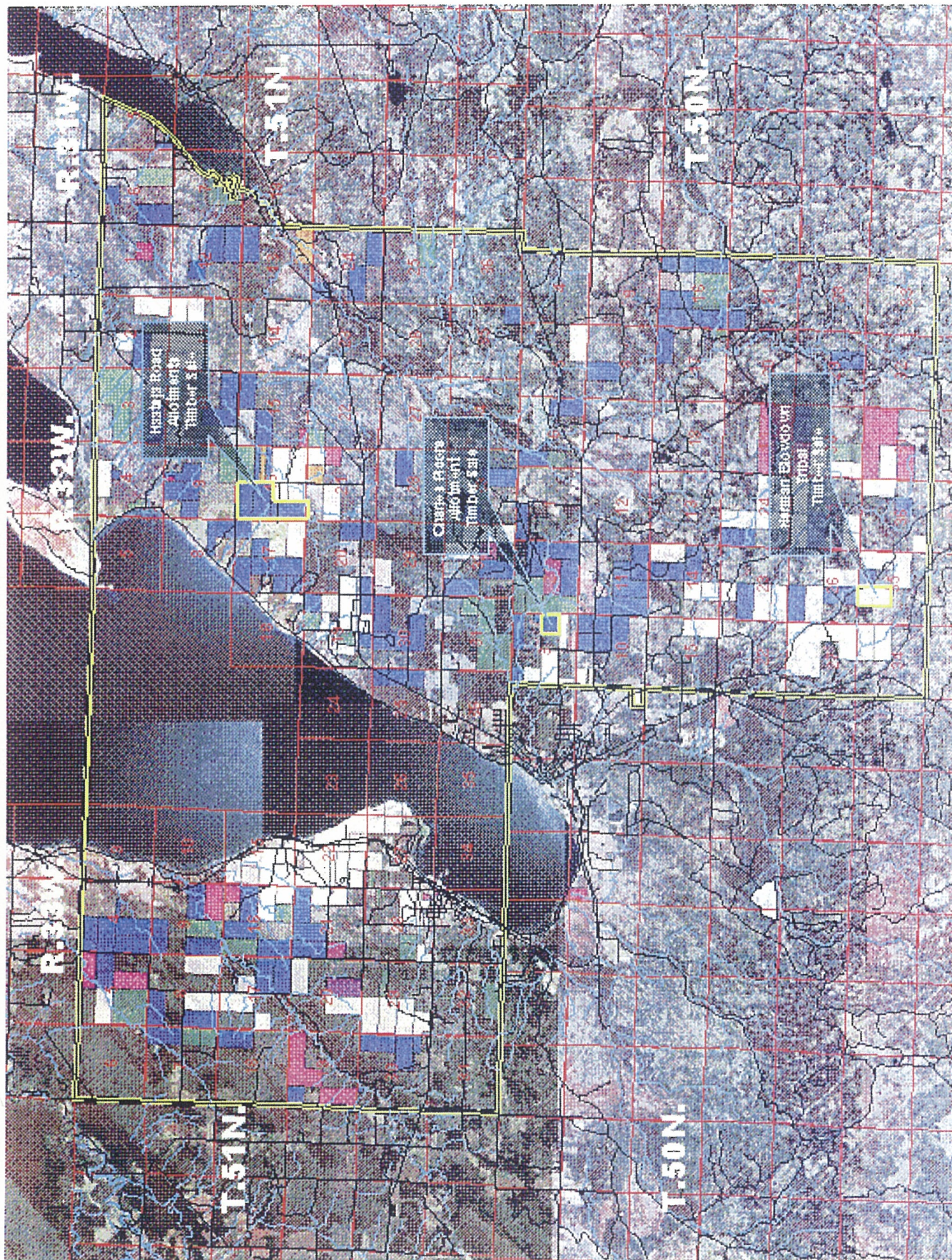
** (Awkewayence Allotments, Louis Jendreau, & Catherine Negawnosawqua)

*** (Delia Pecore, Yabewaywedung, & Kawbebonoka)

**** (Catherine Valentine, Sophia Lamson, & Rosalie Robillard)



***** (Mawdwaysenoquay, Rosa Burns, & Daniel Skye)

SECTION 1: FY 2005-2006 HARVEST PLAN



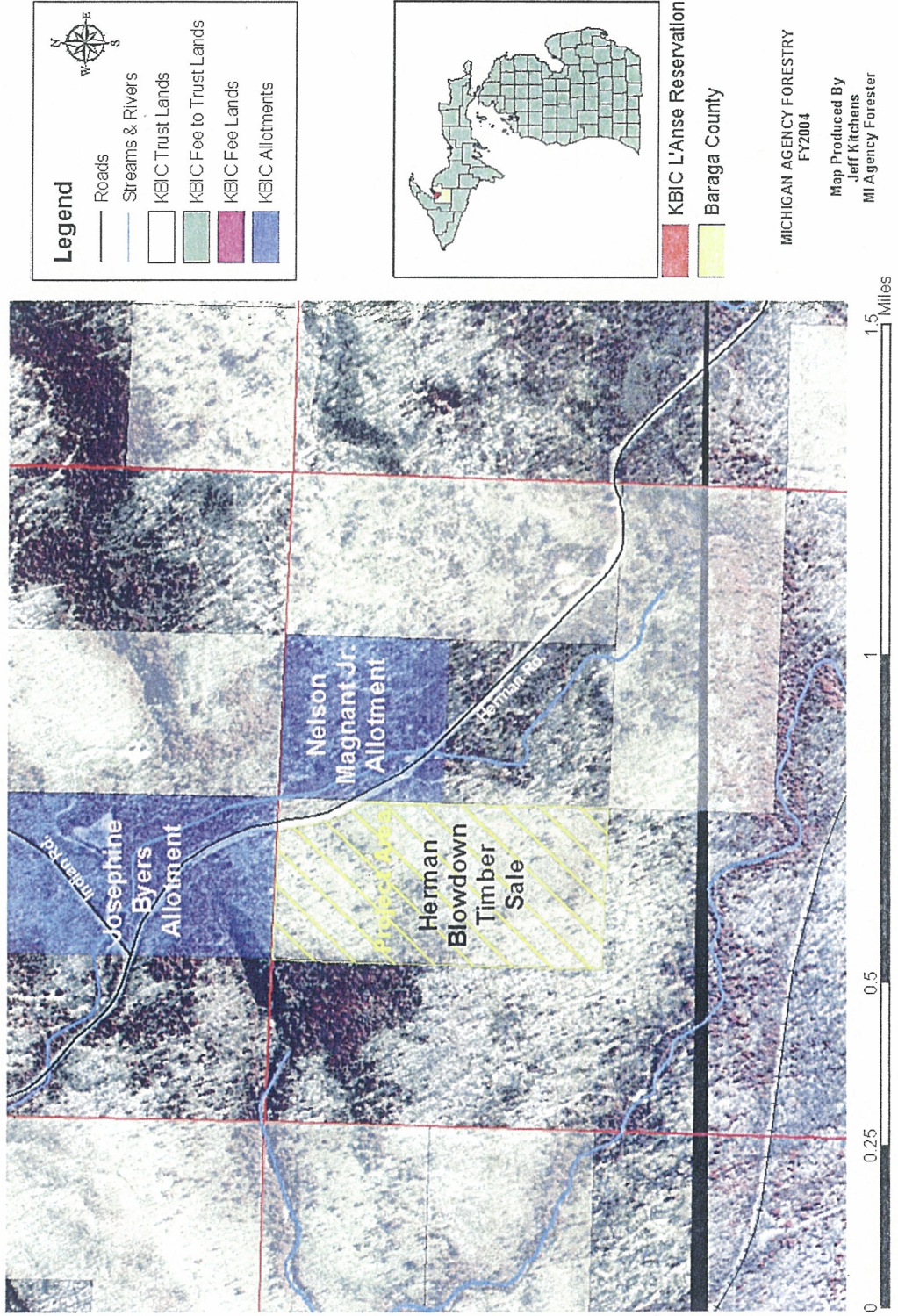
Herman Blowdown

Ownership	Legal Description	Est. Acres	Comp(s)	Stand(s)	Prescription	Setup	Harvest
Tribal	E 1/2 NW 1/4 Sec35 T50N R33W	80	308	42, 43, 44 45, 46, 47	Hardwood Thinning	FY04-05	FY05-06

Herman Blowdown Tribal Timber Sale – Keweenaw Bay Indian Community

Township 50 North, Range 33 West, Michigan Meridian, Section 35,
the NE 1/4 of the NW 1/4
L'Anse Township, Baraga County, Michigan (80 acres).



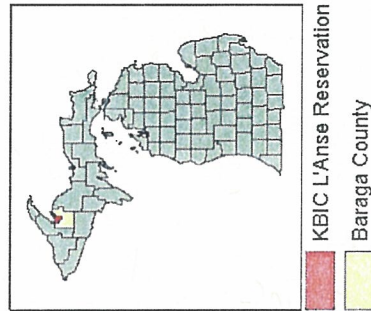
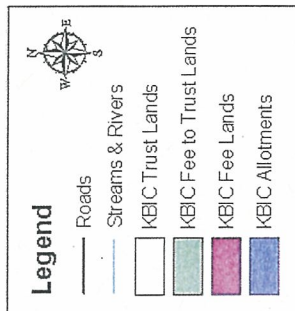
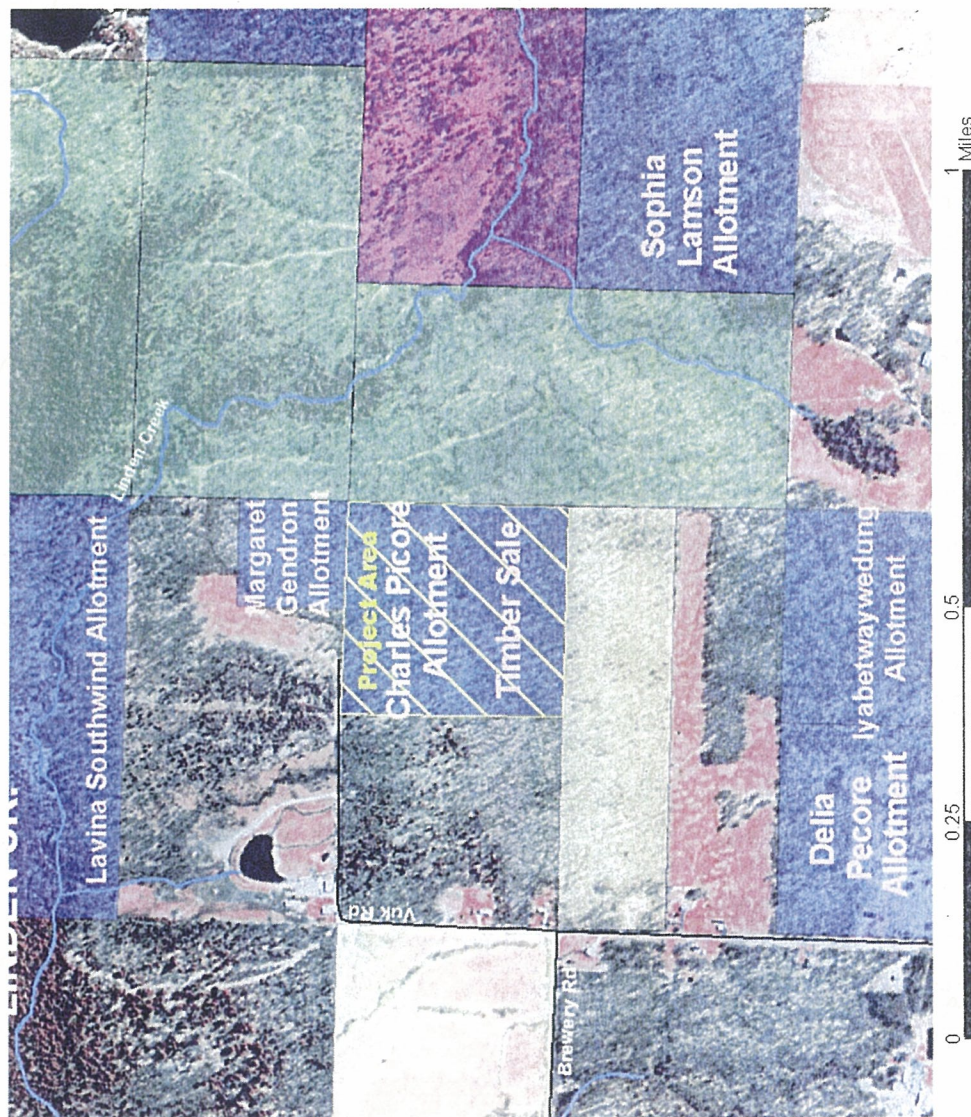
Charles Picore

Ownership	Legal Description	Est. Acres	Comp(s)	Stand(s)	Prescription	Setup	Harvest
Allotment	NE 1/4 SW 1/4 Sec 3 T50N R33W	40	306	856	Aspen Clearcut & Hardwood Thinning	FY04-05	FY05-06



Charles Picore Allotment Timber Sale – Keweenaw Bay Indian Community

Township 50 North, Range 33 West, Michigan Meridian, Section 3,
the NE 1/4 of the SE 1/4,
L'Anse Township, Baraga County, Michigan (40 acres).



MICHIGAN AGENCY FORESTRY
FY2004

Map Produced By
Jeff Kitchens
MI Agency Forester

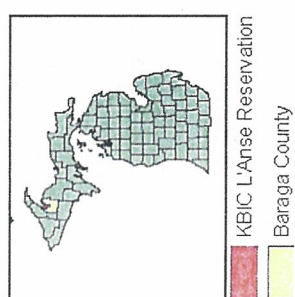
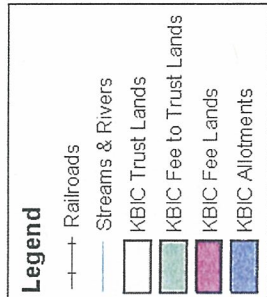
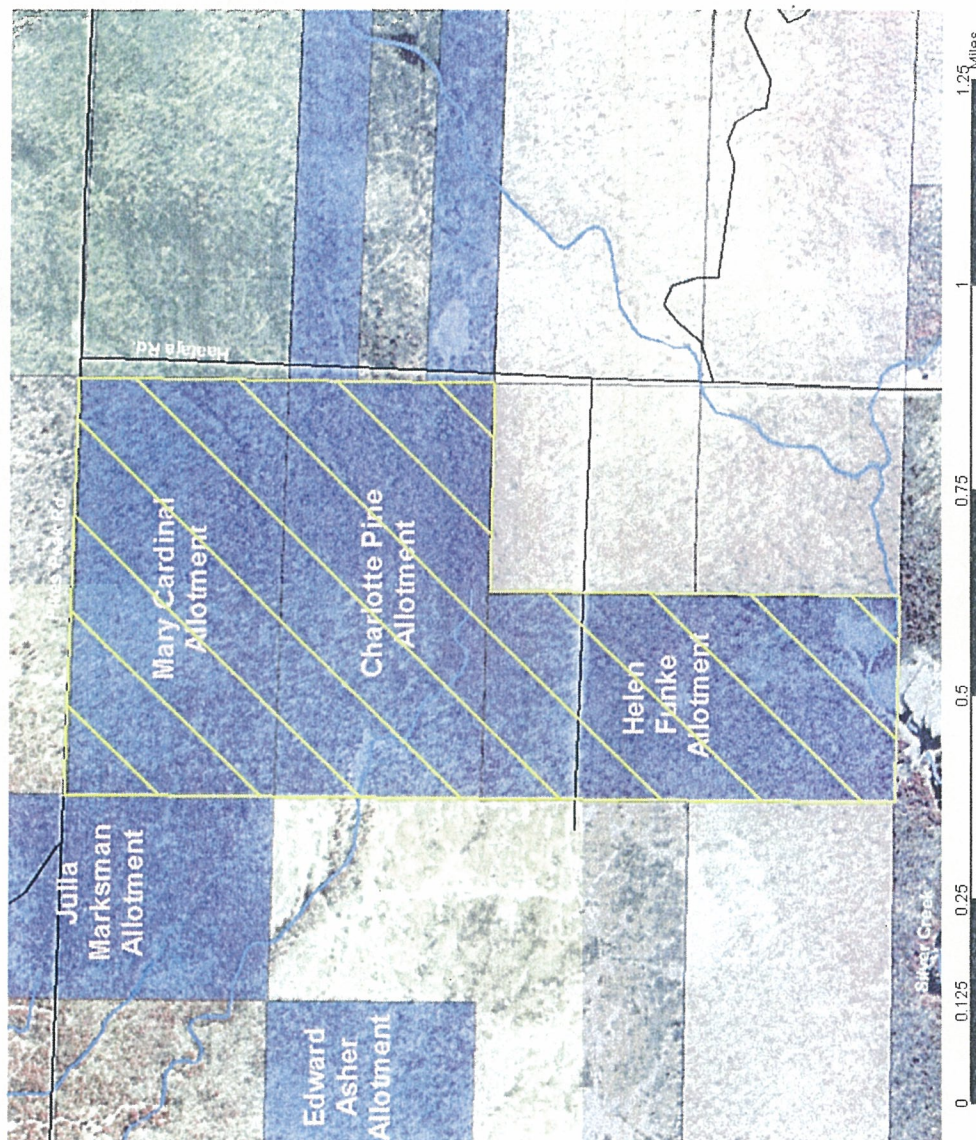
Haataja Road Allotments

Ownership	Legal Description	Est. Acres	Comp(s)	Stand(s)	Prescription	Setup	Harvest
Allotment	S 1/2 NW 1/4 Sec 16 T51N R32	240	305	807, 806 820-824	Aspen Clearcut & Hardwood Thinning	FY04-05	FY05-06



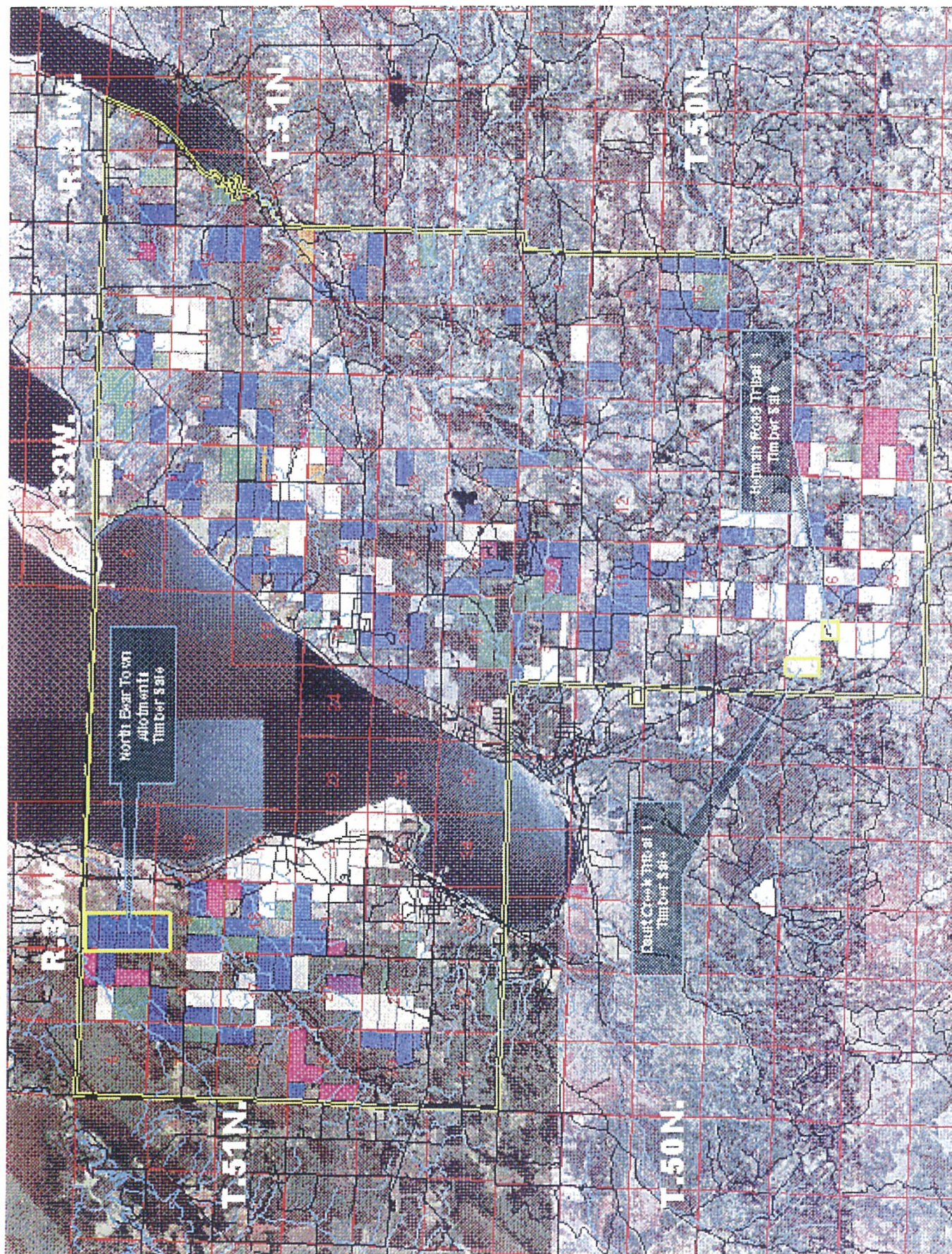
Haataja Road Allotments Timber Sale - Keweenaw Bay Indian Community

Township 51 North, Range 32 West, Michigan Meridian,
Section 16, the W 1/2,
L'Anse Township, Baraga County, Michigan (240 acres).



MICHIGAN AGENCY FORESTRY
FY2005
Map Produced By
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MI Agency Forester

SECTION 2: FY 2006-2007 HARVEST PLAN



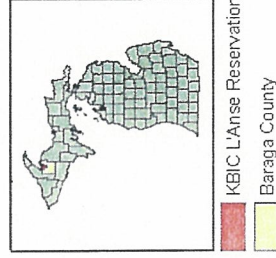
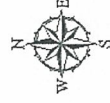
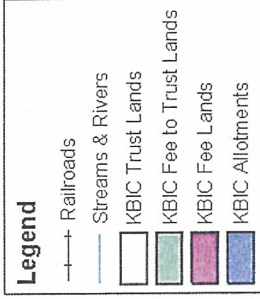
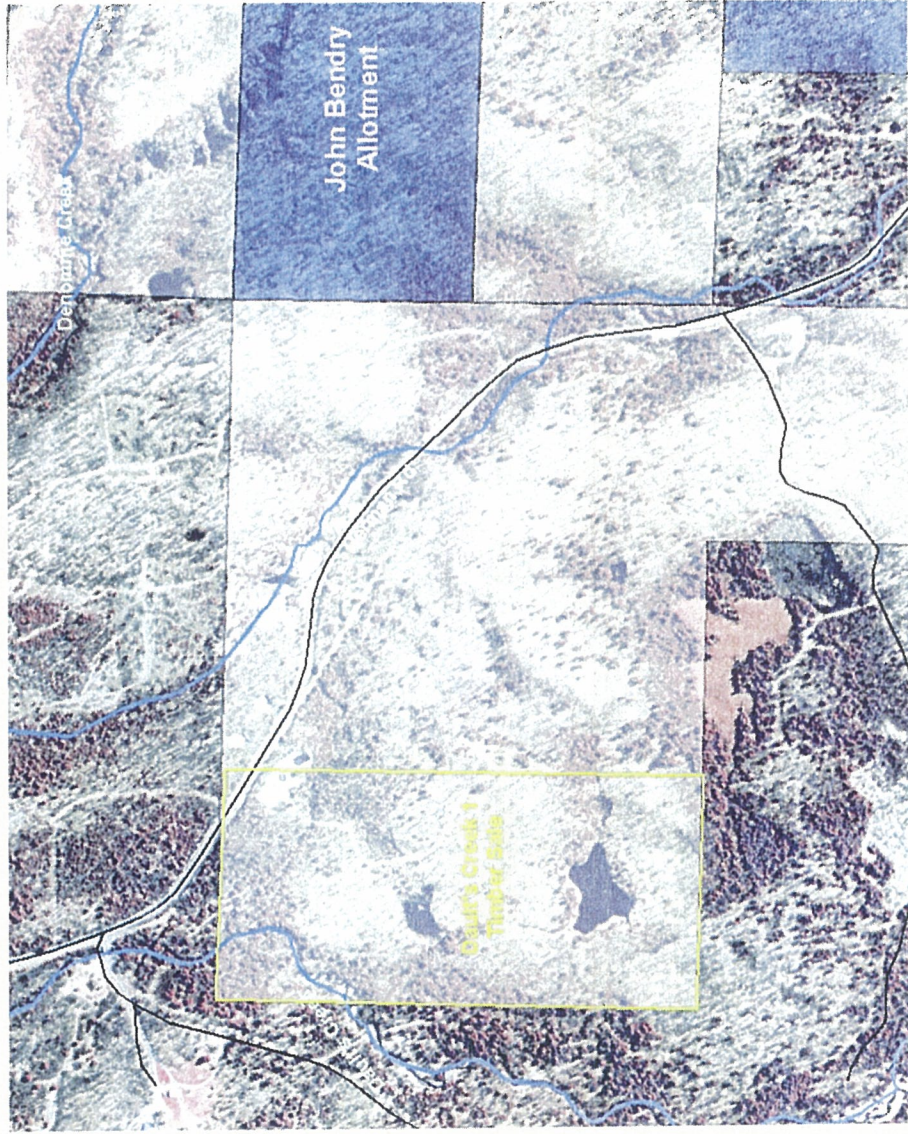
Dault Creek 1

Ownership	Legal Description	Est. Acres	Comp(s)	Stand(s)	Prescription	Setup	Harvest
Tribal	E 1/2 NW 1/4 Sec 27 T50N R33W	80	308	1, 2, 3 4, 5	Hardwood Thinning & Aspen Clearcut	FY05-06	FY06-07



Dault's Creek 1 Timber Sale - Keweenaw Bay Indian Community

Township 50 North, Range 33 West, Michigan Meridian,
Section 27, the W 1/2 of the NW 1/4,
L'Anse Township, Baraga County, Michigan (80 acres).



MICHIGAN AGENCY FORESTRY
FY2005

Map Produced By
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MI Agency Forester

Herman Road 1

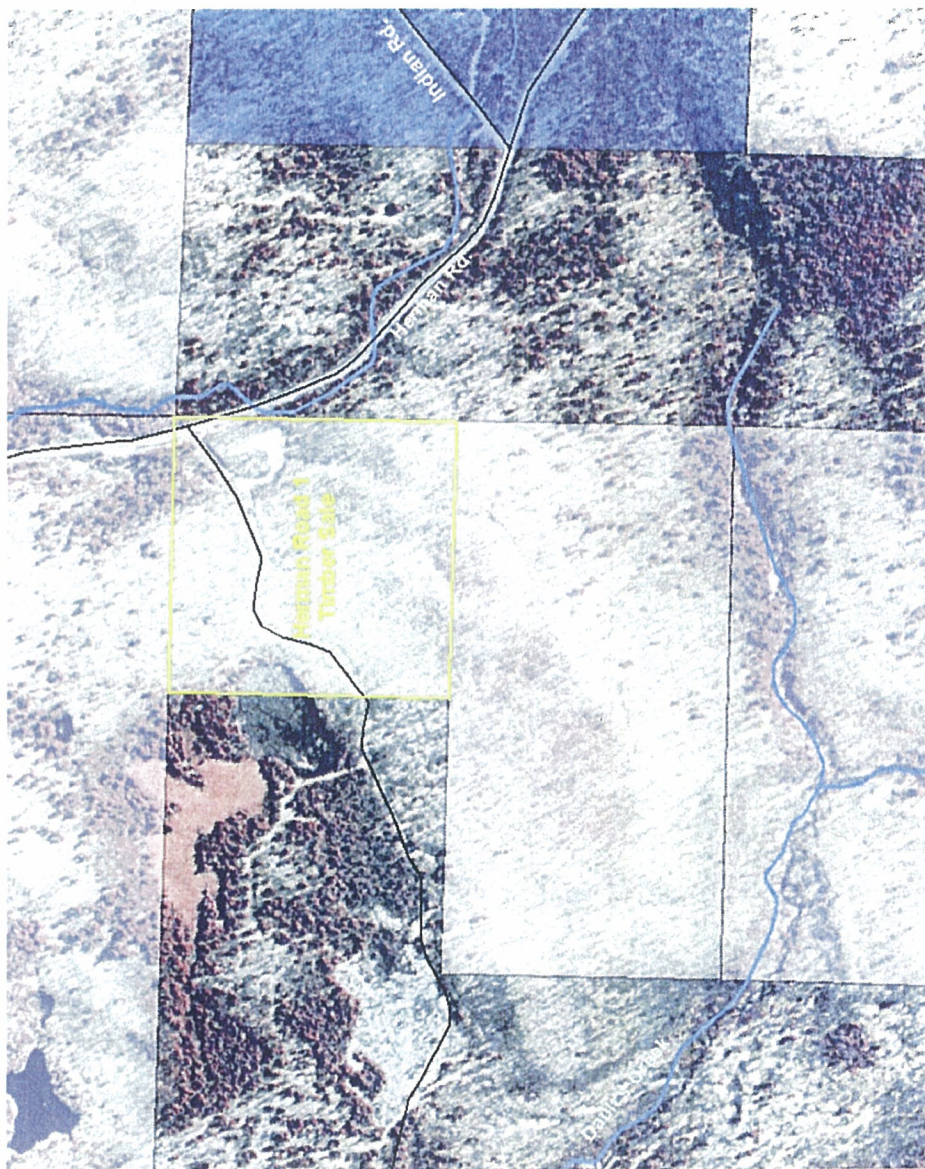
Ownership	Legal Description	Est. Acres	Comp(s)	Stand(s)	Prescription	Setup	Harvest
Tribal	NE 1/4 SE 1/4 Sec 27 T 50N R33W	40	308	8, 9, 11	Hardwood Thinning	FY05-06	FY06-07



Herman Road 1 Timber Sale - Keweenaw Bay Indian Community

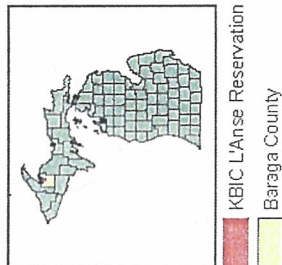
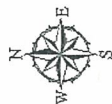


Township 50 North, Range 33 West, Michigan Meridian,
Section 27, the NW 1/4 of the SE 1/4,
L'Anse Township, Baraga County, Michigan (40 acres).



Legend

- +— Railroads
- Streams & Rivers
- KBIC Trust Lands
- KBIC Fee to Trust Lands
- KBIC Fee Lands
- KBIC Allotments



MICHIGAN AGENCY FORESTRY
FY2005

Map Produced By
Jeff Kitchens
MI Agency Forester

North Bear Town Road Allotments

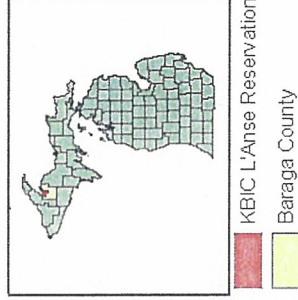
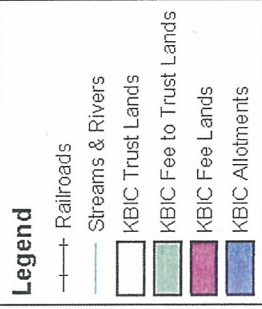
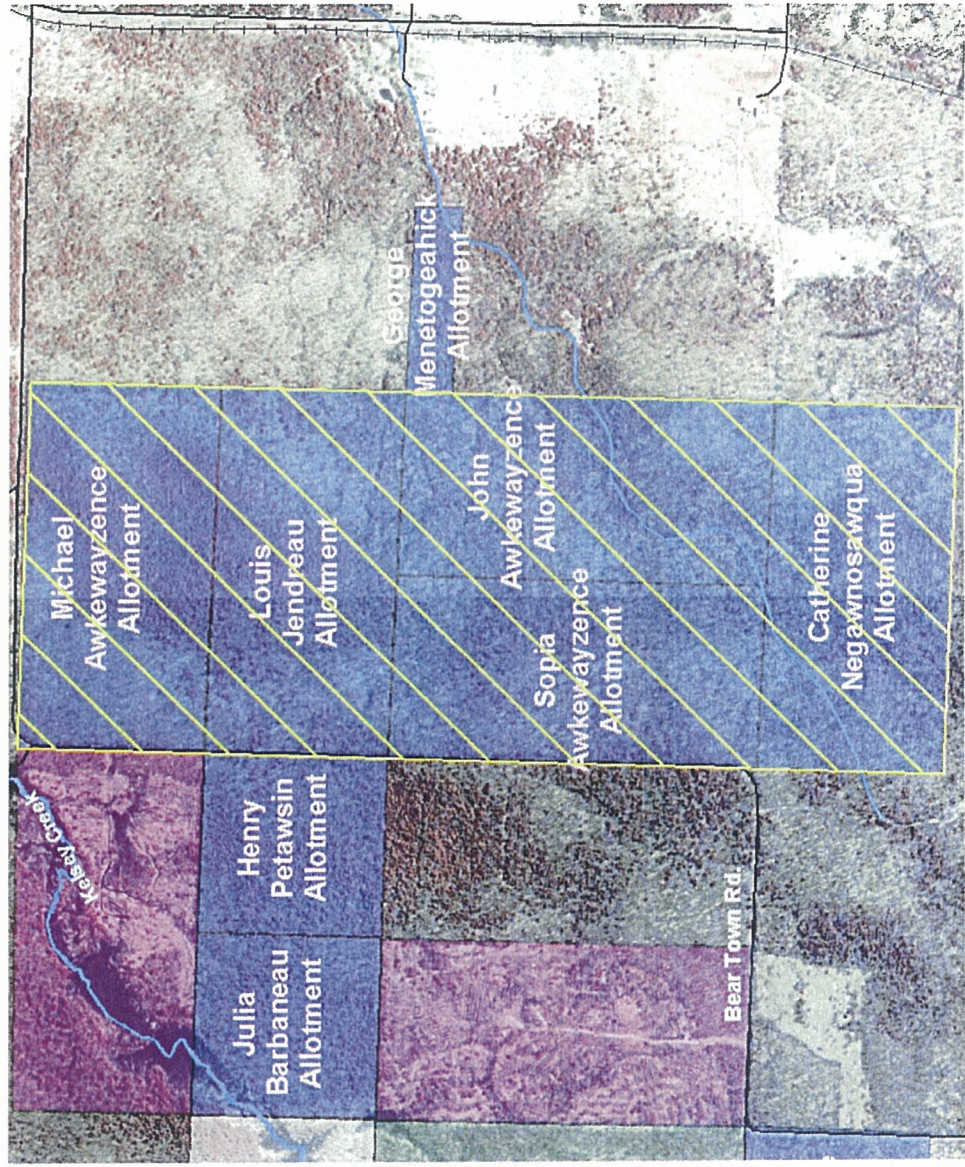
Ownership	Legal Description	Est. Acres	Comp(s)	Stand(s)	Prescription	Setup	Harvest
Allotments	W 1/2 Sec 4 & N 1/2 NW 1/4 T51N R33W	400	302	801 - 819, omit 814	Aspen Clearcut & Hardwood Thinning	FY05-06	FY06-07



North Bear Town Road Allotments Timber Sale - Keweenaw Bay Indian Community



Township 51 North, Range 33 West, Michigan Meridian,
Section 34, the W 1/2,
L'Anse Township, Baraga County, Michigan (400 acres).

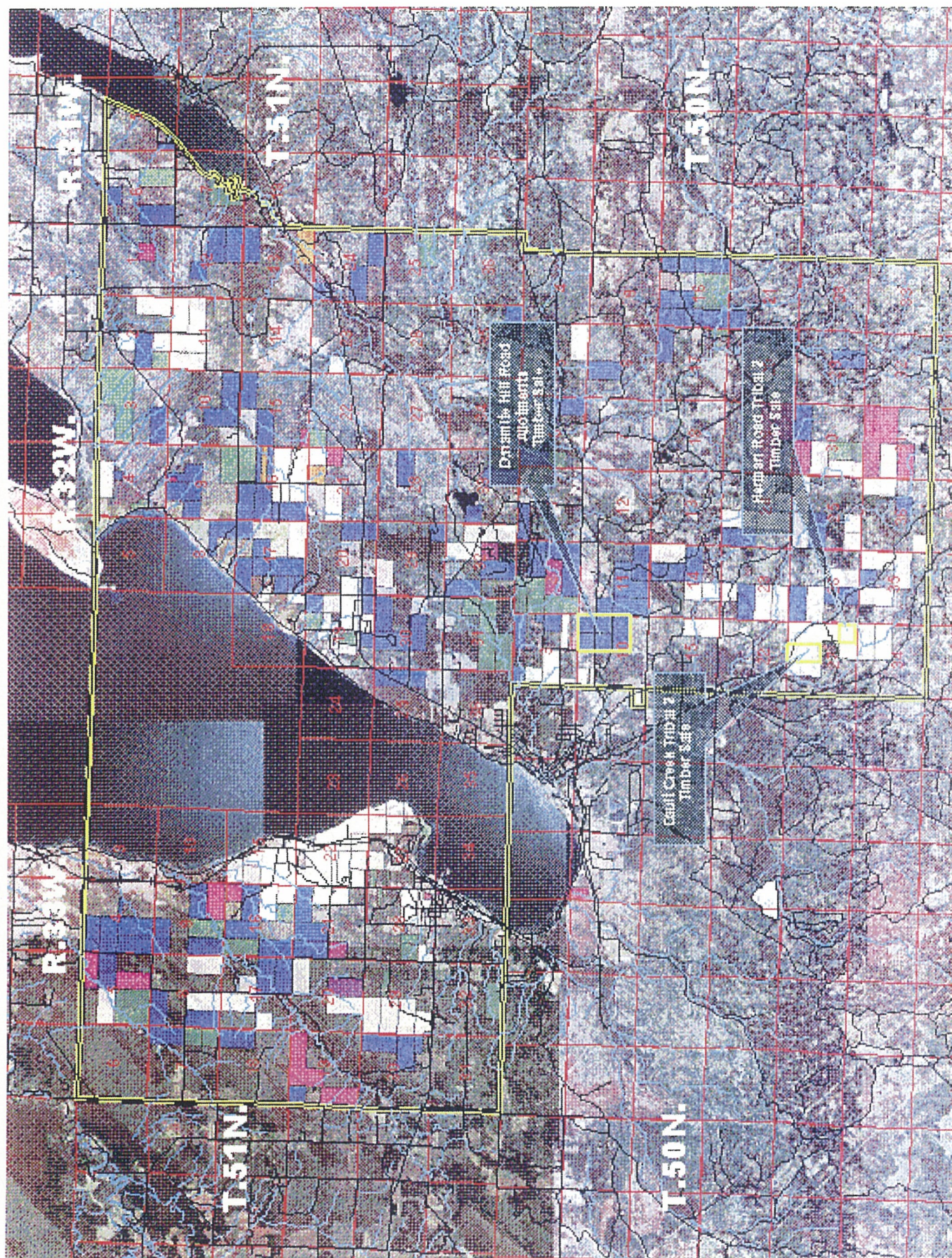


MICHIGAN AGENCY FORESTRY
FY2005

Map Produced By
Jeff Kitchens
MI Agency Forester



SECTION 3: FY 2007-2008 HARVEST PLAN



Dault's Creek 2

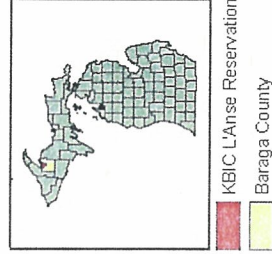
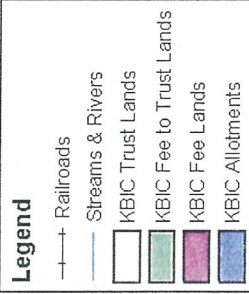
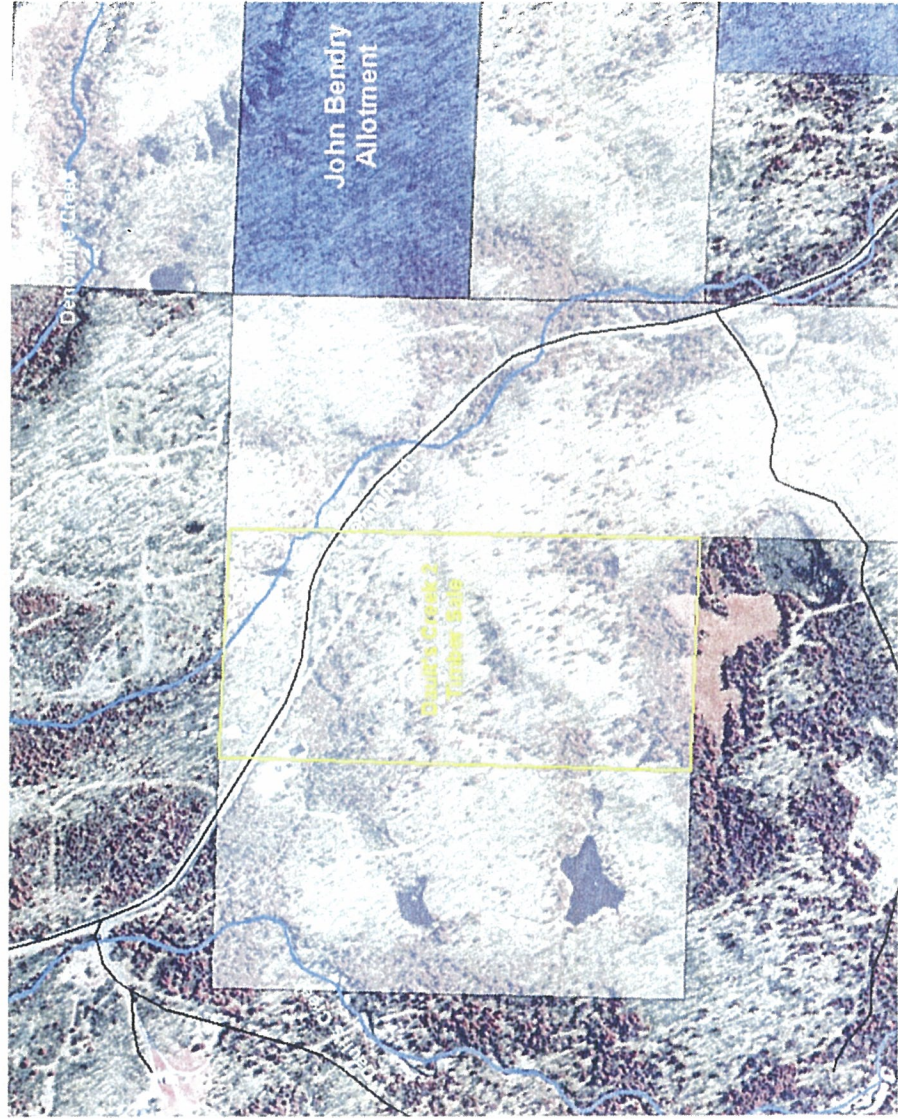
Ownership	Legal Description	Est. Acres	Comp(s)	Stand(s)	Prescription	Setup	Harvest
Tribal	W 1/2 NE 1/4 Sec 27 T50N R33W	80	308	2, 4, 6, 7	Hardwood Thinning & Aspen Clearcut	FY06-07	FY07-08



Dault's Creek 2 Timber Sale - Keweenaw Bay Indian Community



Township 50 North, Range 33 West, Michigan Meridian,
Section 27, the E 1/2 of the NE 1/4,
L'Anse Township, Baraga County, Michigan (80 acres).



MICHIGAN AGENCY FORESTRY
FY2005

Map Produced By
Jeff Kitchens
MI Agency Forester

Herrn Road 2

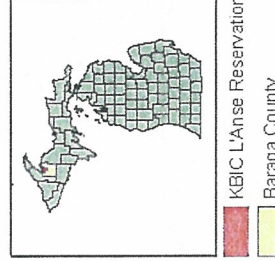
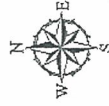
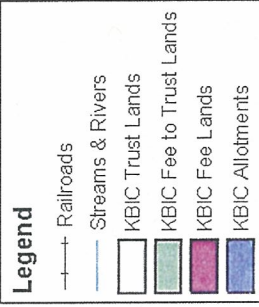
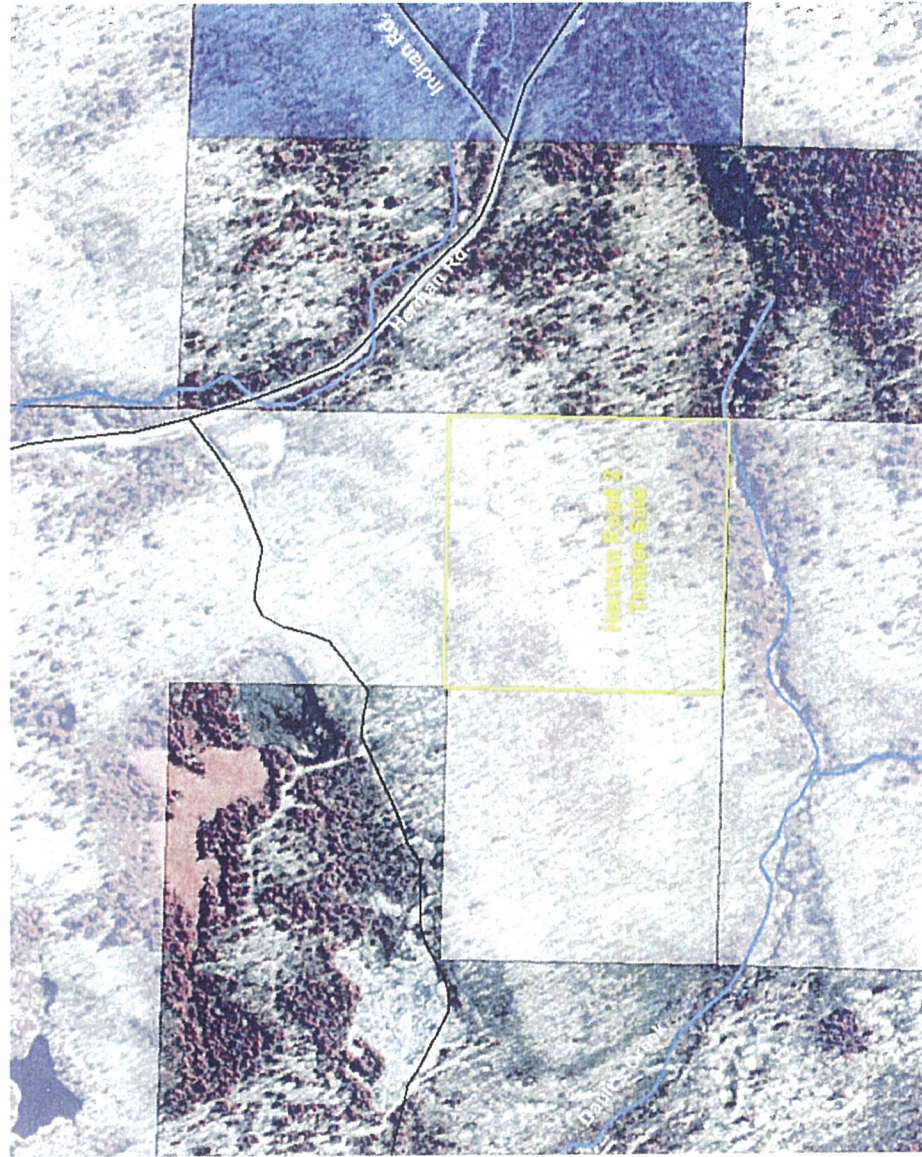
Ownership	Legal Description	Est. Acres	Comp(s)	Stand(s)	Prescription	Setup	Harvest
Tribal	SE 1/4 SE 1/4 Sec 27 T 50N R33W	40	308	8, 9, 11	Hardwood Thinning	FY06-07	FY07-08



Herman Road 2 Timber Sale - Keweenaw Bay Indian Community



Township 50 North, Range 33 West, Michigan Meridian,
Section 27, the SE 1/4 of the SE 1/4,
L'Anse Township, Baraga County, Michigan (40 acres).



MICHIGAN AGENCY FORESTRY
FY2005

Map Produced By
Jeff Kitchens
MI Agency Forester

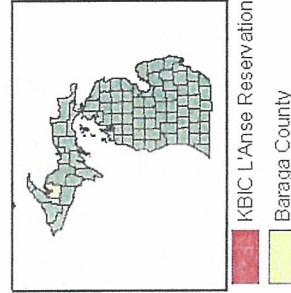
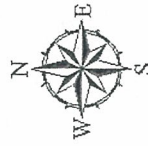
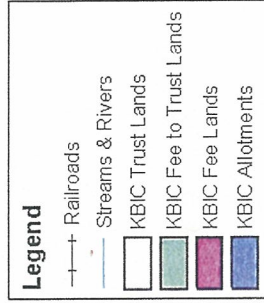
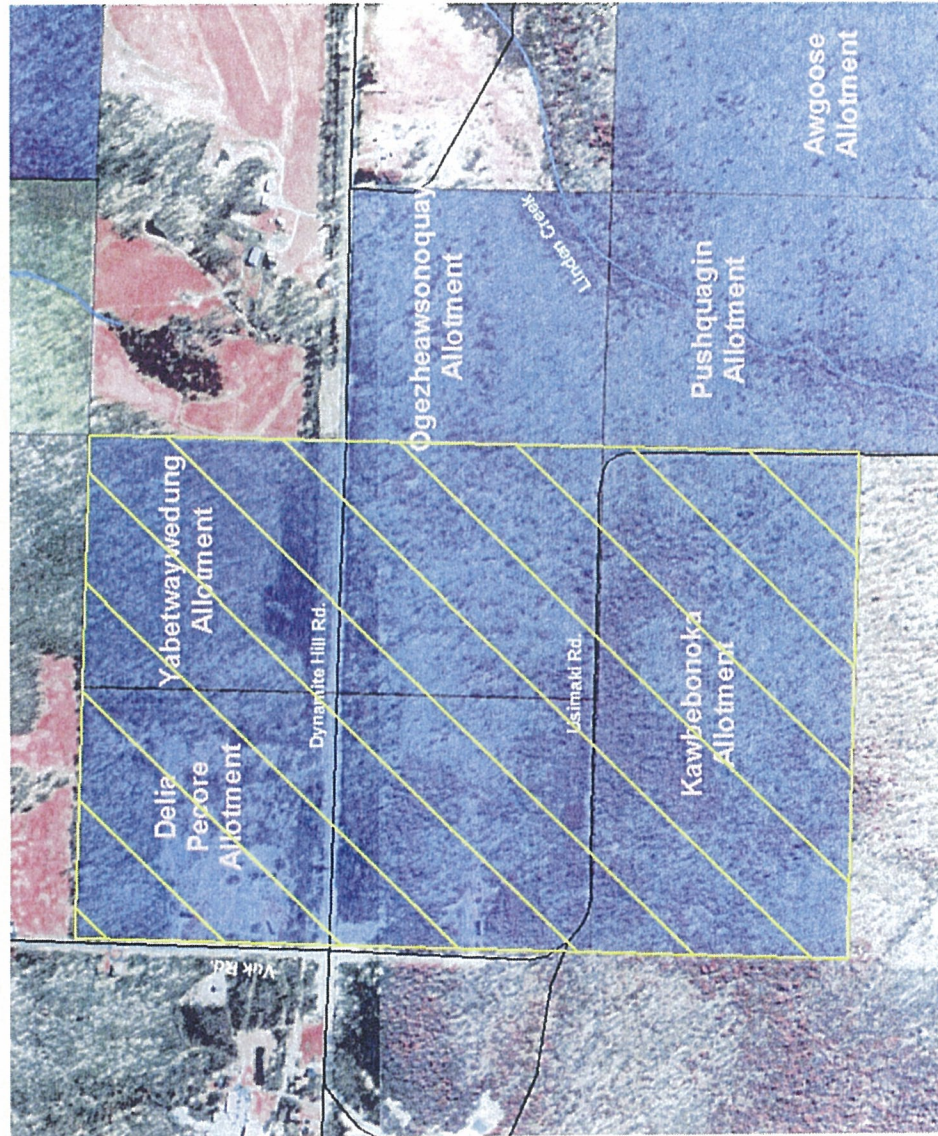
Dynamite Hill Road Allotments

Ownership	Legal Description	Est. Acres	Comp(s)	Stand(s)	Prescription	Setup	Harvest
Allotments	NW 1/4 Sec 10 & S 1/2 SE 1/4 Sec 3 T50N R33W	240	306 & 307	904, 905, 912 801-807	Aspen Clearcut & Hardwood Thinning	FY06-07	FY07-08



Dynamite Hill Road Allotments Timber Sale - Keweenaw Bay Indian Community

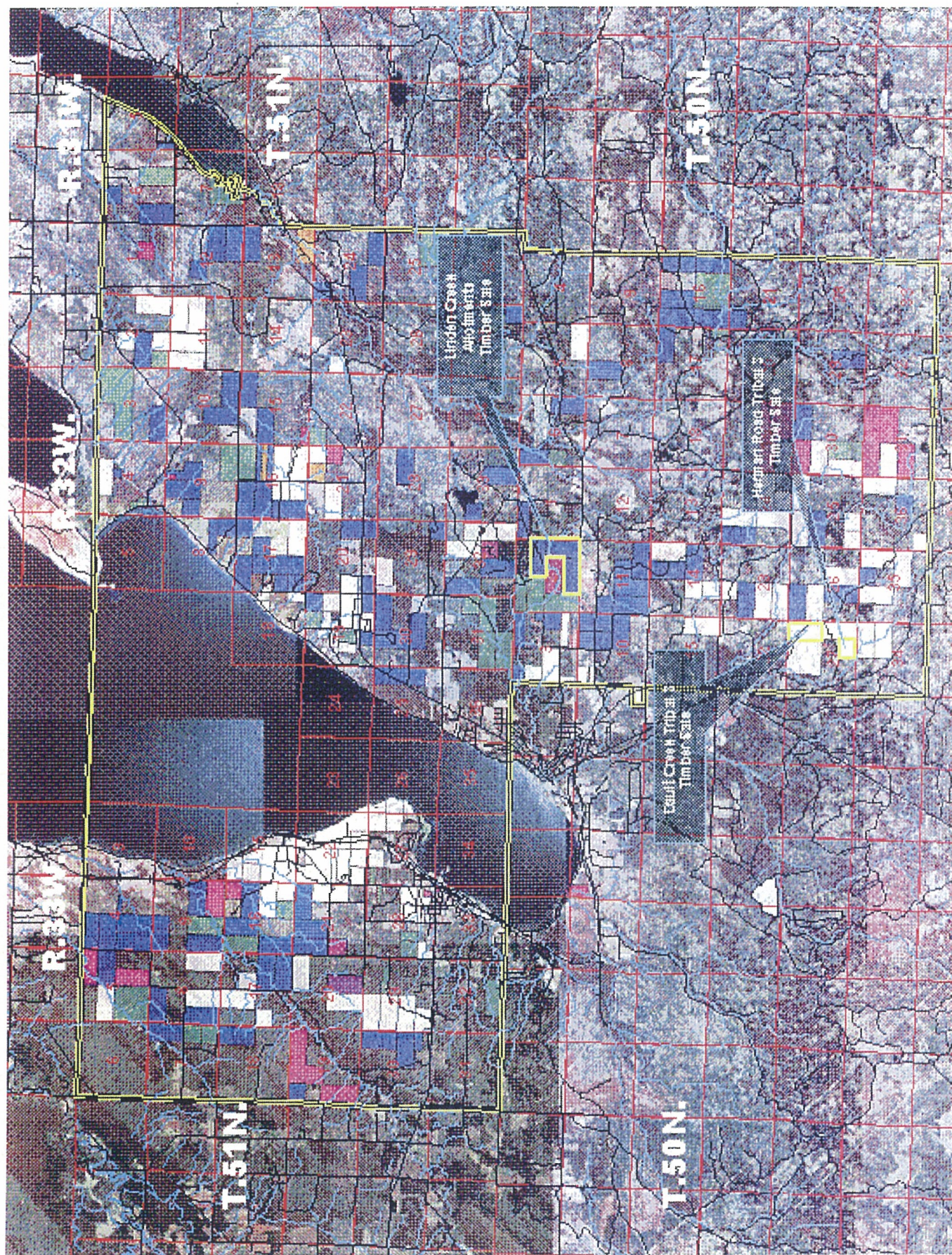
Township 50 North, Range 33 West, Michigan Meridian,
Section 10, the NE 1/4, & Section 3, the S 1/2, of the SE 1/4
L'Anse Township, Baraga County, Michigan (240 acres).



MICHIGAN AGENCY FORESTRY
FY2005

Map Produced By
Jeff Kitchens
MI Agency Forester

SECTION 4: FY 2008-2009 HARVEST PLAN



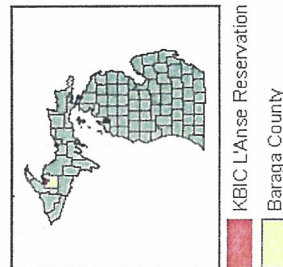
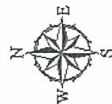
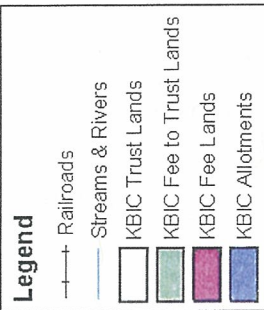
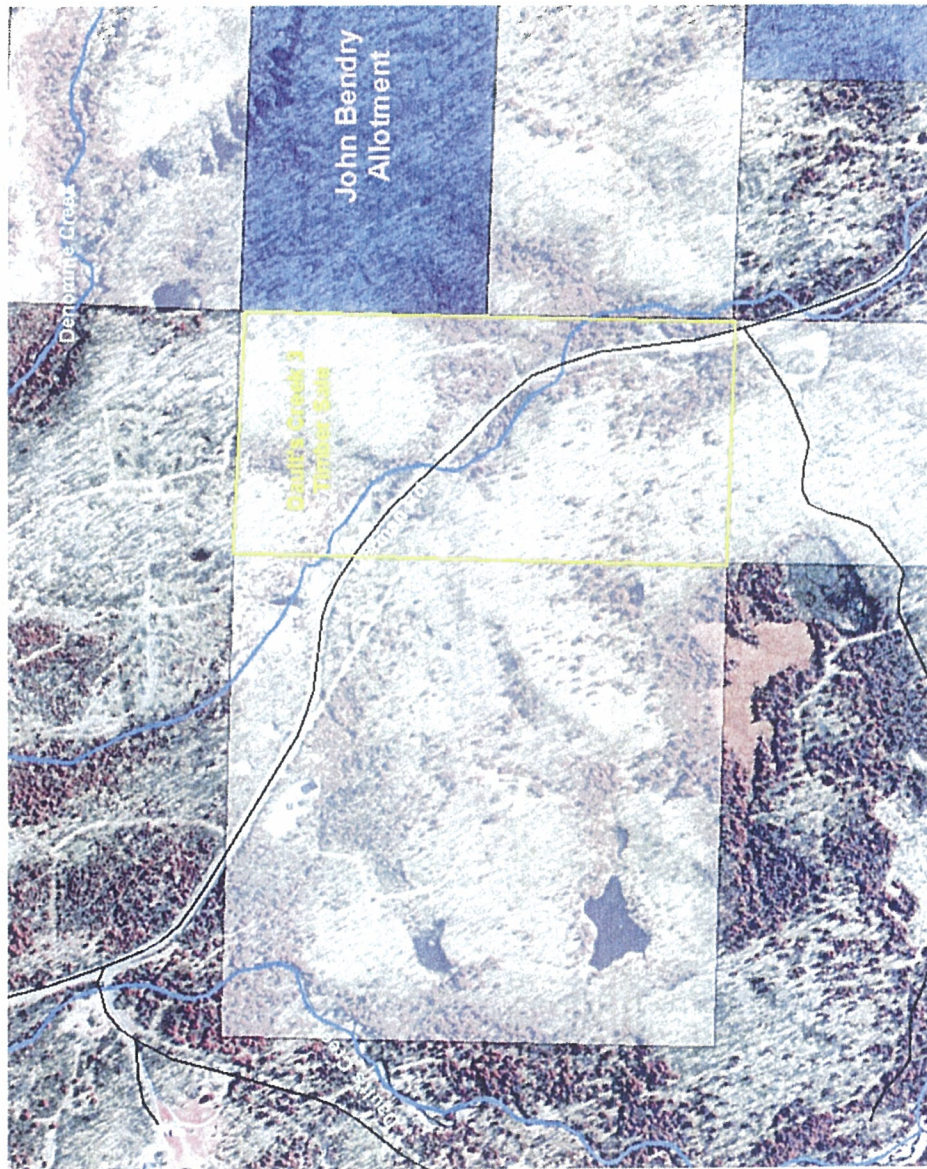
Dault's Creek 3

Ownership	Legal Description	Est. Acres	Comp(s)	Stand(s)	Prescription	Setup	Harvest
Tribal	E 1/2 NE 1/4 Sec 27 T50N R33W	80	308	6, 8, 58	Hardwood Thinning & Aspen Clearcut	FY07-08	FY08-09



Dault's Creek 3 Timber Sale - Keweenaw Bay Indian Community

Township 50 North, Range 33 West, Michigan Meridian,
Section 27, the W 1/2 of the NE 1/4,
L'Anse Township, Baraga County, Michigan (80 acres).



MICHIGAN AGENCY FORESTRY
FY2005

Map Produced By
Jeff Kitchens
MI Agency Forester

Herman Road 3

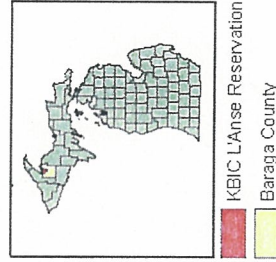
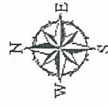
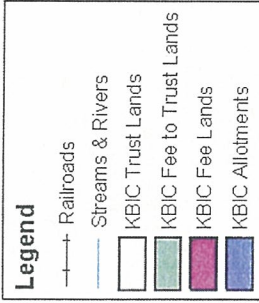
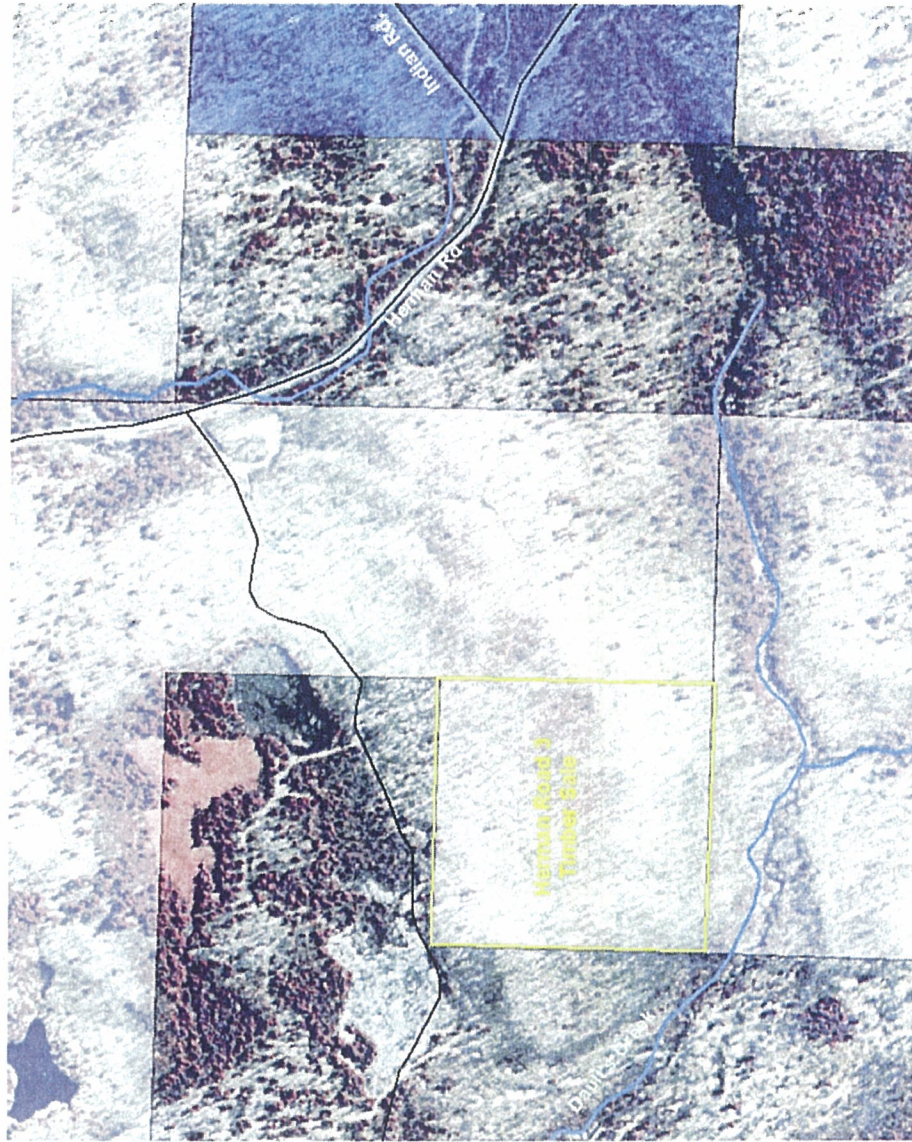
Ownership	Legal Description	Est. Acres	Comp(s)	Stand(s)	Prescription	Setup	Harvest
Tribal	SE 1/4 SE 1/4 Sec 27 T 50N R33W	40	308	8, 9, 11	Hardwood Thinning	FY07-08	FY08-09



Herman Road 3 Timber Sale - Keweenaw Bay Indian Community



Township 50 North, Range 33 West, Michigan Meridian,
 Section 27, the SW 1/4 of the SE 1/4,
 L'Anse Township, Baraga County, Michigan (40 acres).



MICHIGAN AGENCY FORESTRY
 FY2005

Map Produced By
 Jeff Kitchens
 MI Agency Forester

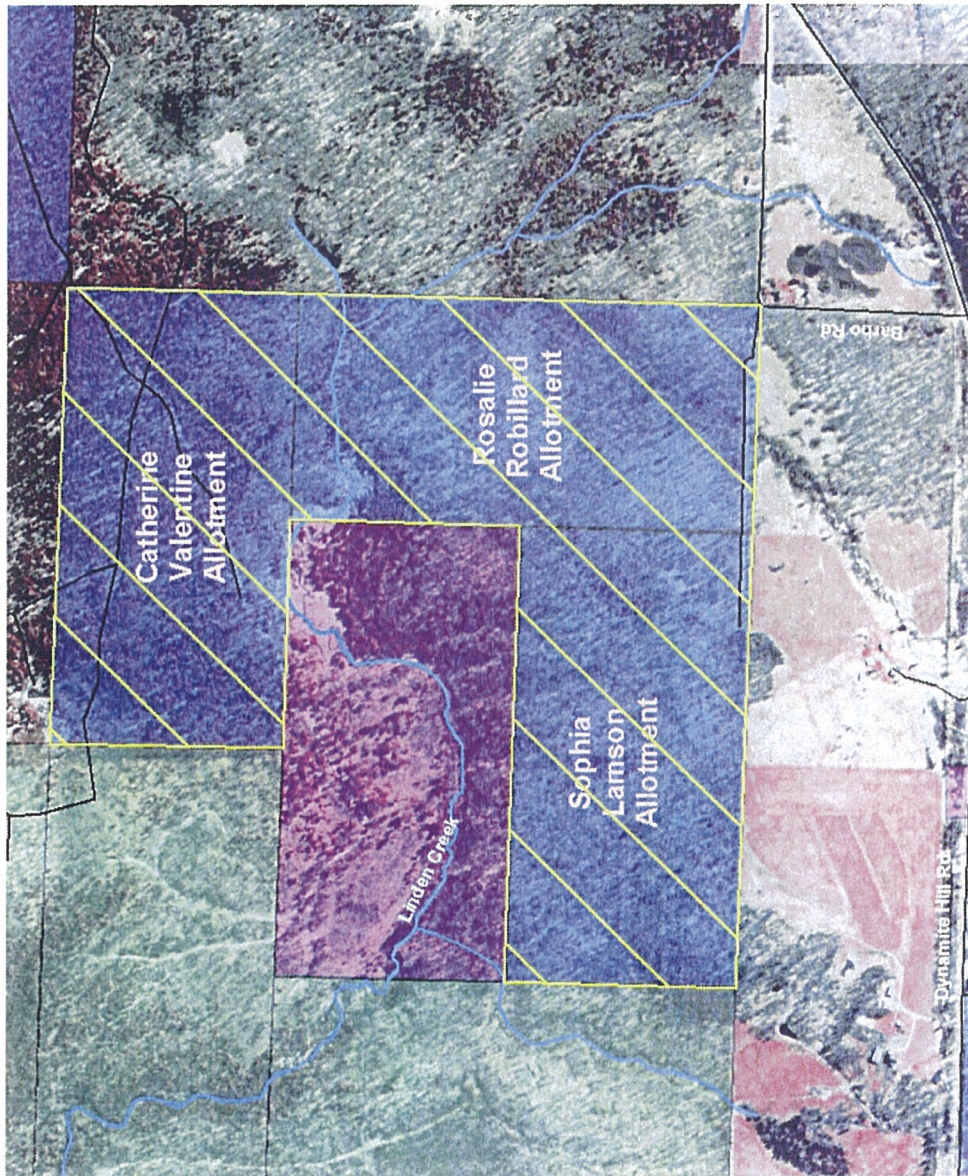
Linden Creek Allotments

Ownership	Legal Description	Est. Acres	Comp(s)	Stand(s)	Prescription	Setup	Harvest
Allotments	Sec 1 & 2 T50N	240	306	865-888	Aspen Clearcut & Hardwood Thinning	FY07-08	FY08-09



Linden Creek Allotments Timber Sale - Keweenaw Bay Indian Community

Township 50 North, Range 33 West, Michigan Meridian,
 Section 2, the SE 1/4,
 L'Anse Township, Baraga County, Michigan (240 acres).



Legend

- +— Railroads
- Streams & Rivers
- KBIC Trust Lands
- KBIC Fee to Trust Lands
- KBIC Fee Lands
- KBIC Allotments



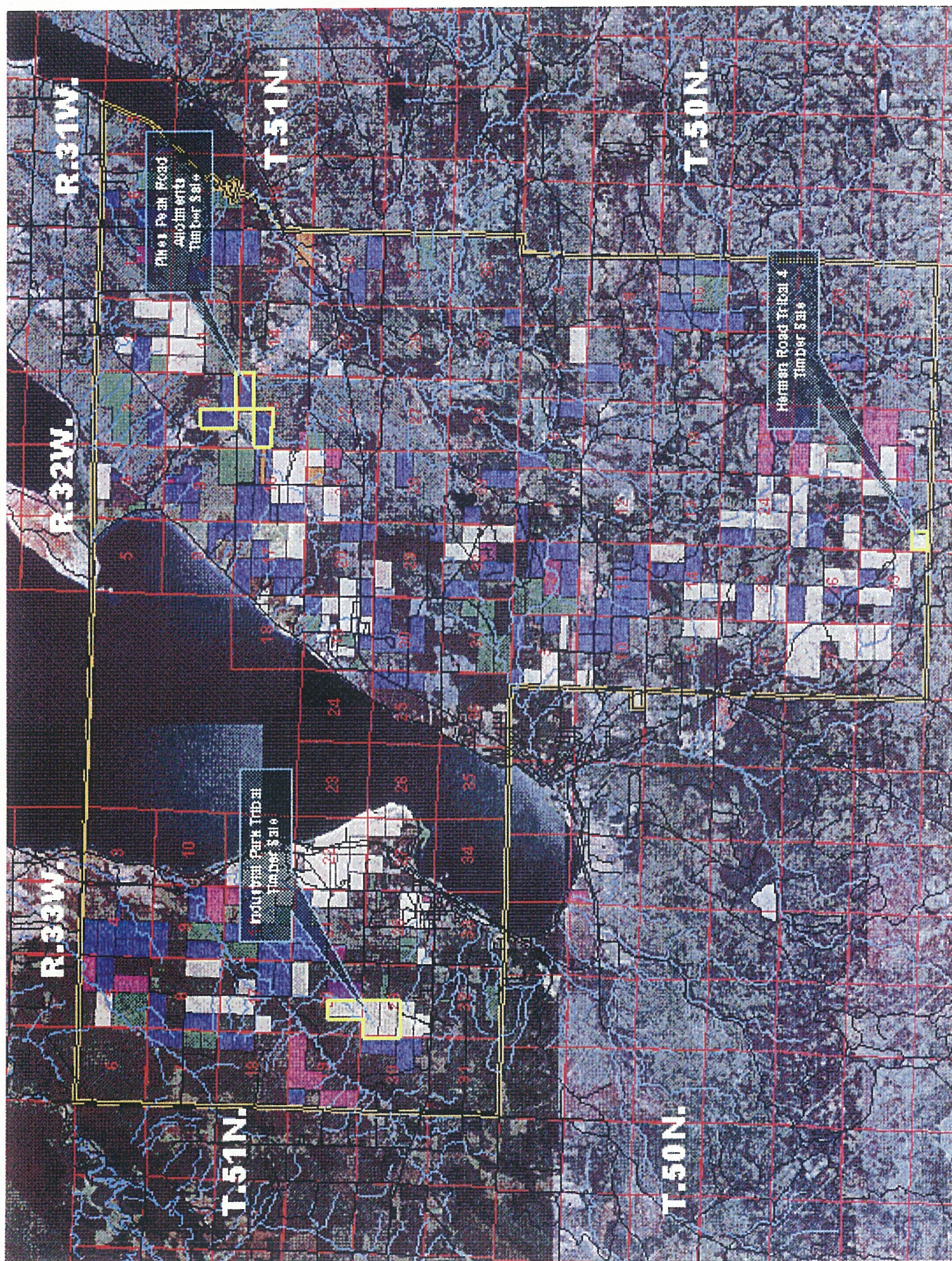
KBIC L'Anse Reservation

Baraga County

MICHIGAN AGENCY FORESTRY
 FY2005

Map Produced By
 Jeff Kitchens
 MI Agency Forester

SECTION 5: FY 2009-2010 HARVEST PLAN



Industrial Park Tribal

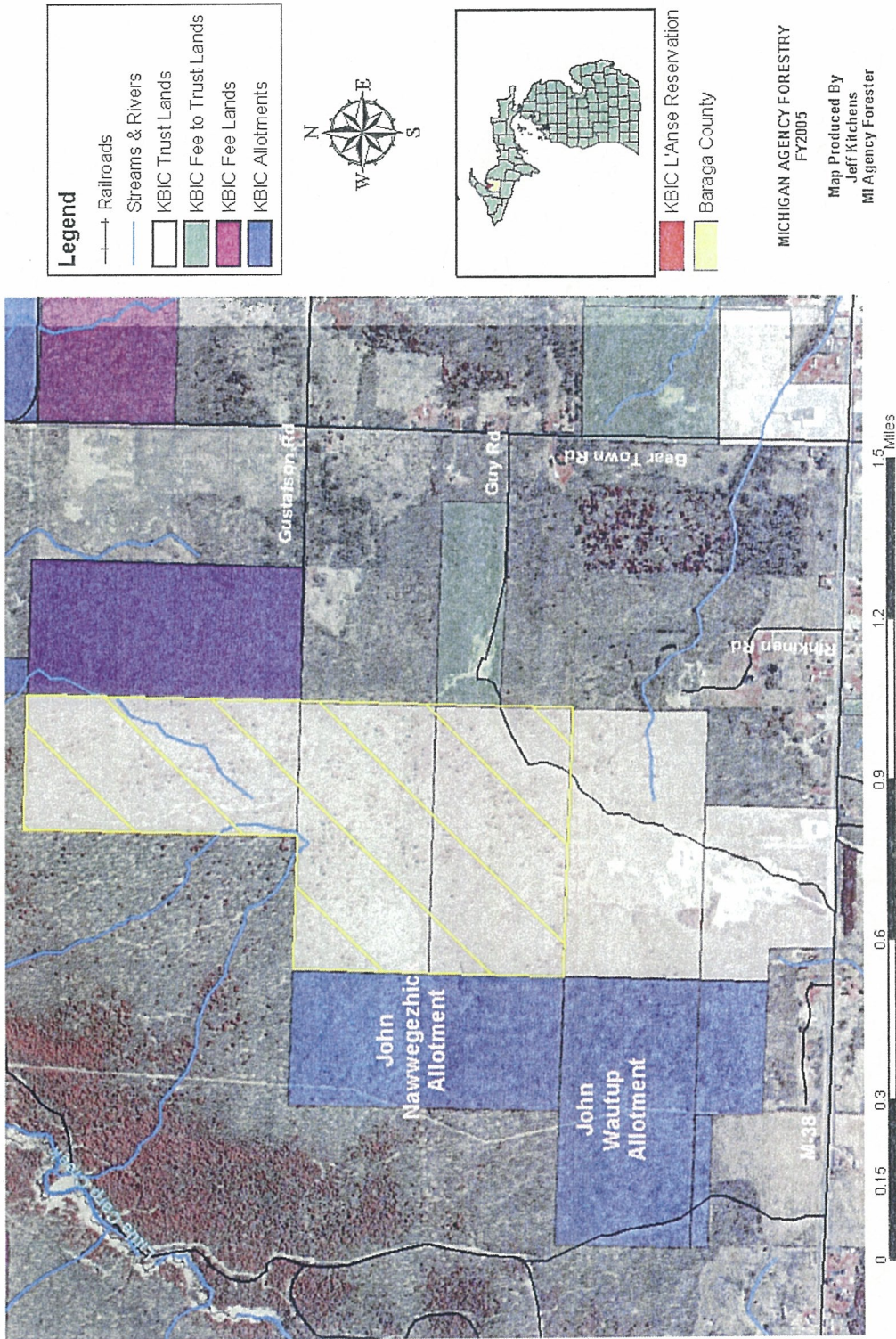
Ownership	Legal Description	Est. Acres	Comp(s)	Stand(s)	Prescription	Setup	Harvest
Tribal	NW 1/4 Sec 29 T51N R33W	240	301	14, 15, 16	Hardwood Removal For Development	FY08-09	FY09-10



Industrial Park Tribal Timber Sale - Keweenaw Bay Indian Community



Township 51 North, Range 33 West, Michigan Meridian,
 Section 29, the NE 1/4, & Section 20, E 1/2, of the SE 1/4
 L'Anse Township, Baraga County, Michigan (240 acres).



Herman Road 4

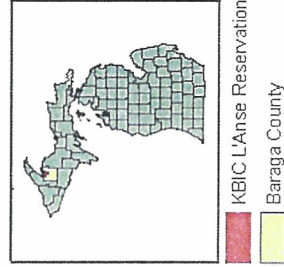
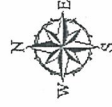
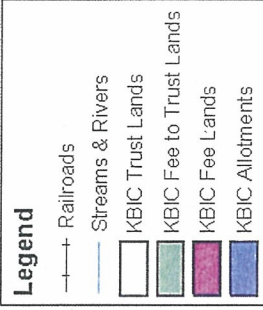
Ownership	Legal Description	Est. Acres	Comp(s)	Stand(s)	Prescription	Setup	Harvest
Tribal	SW 1/4 SW 1/4 Sec 36 T50N R33W	40	308	55, 56	Hardwood Thinning	FY08-09	FY09-10



Herman Road 4 Timber Sale - Keweenaw Bay Indian Community



Township 50 North, Range 33 West, Michigan Meridian,
Section 36, the SW 1/4 of the SW 1/4,
L'Anse Township, Baraga County, Michigan (40 acres).



MICHIGAN AGENCY FORESTRY
FY2005

Map Produced By
Jeff Kitchens
MI Agency Forester



Pikes Peak Road Allotments

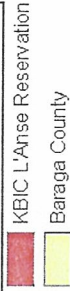
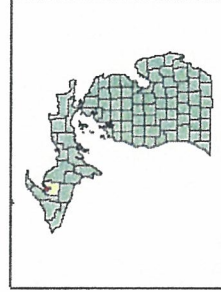
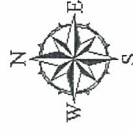
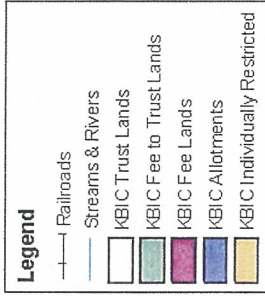
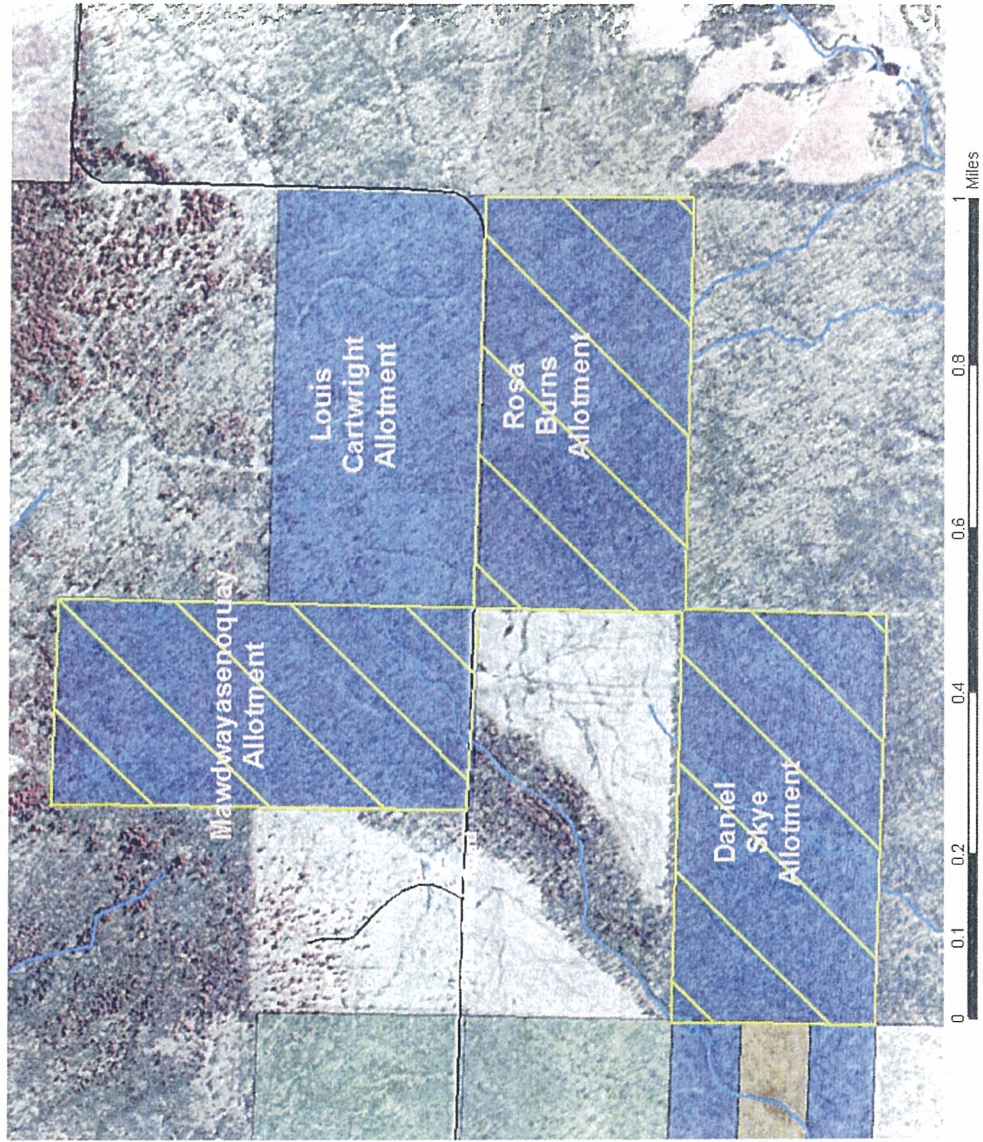
Ownership	Legal Description	Est. Acres	Comp(s)	Stand(s)	Prescription	Setup	Harvest
Allotments	Sec 10 & 15 T51N R32W	240	303 & 304	814, 818, 819 820, 830	Aspen Clearcut & Hardwood Thinning	FY08-09	FY09-10



Pikes Peak Road Allotments Timber Sale - Keweenaw Bay Indian Community



Township 51 North, Range 33 West, Michigan Meridian,
Section 10, S 1/2, & Section 15, N 1/2,
L'Anse Township, Baraga County, Michigan (240 acres).



MICHIGAN AGENCY FORESTRY
FY2005

Map Produced By
Jeff Kitchens
MI Agency Forester

SUMMARY & SUGGESTIONS

Since 1990 the management of KBIC's commercial timberlands in trust has fluctuated from less than 40 acres to more than 440 acres treated in a single year. The total volume of wood harvested has been around 18,000mbf. If the annual allowable cut had been achieved each year since 1990 the total volume of timber would have been 42,000mbf. In terms of dollars, this would have equated to almost \$1 million more in revenue for both the Keweenaw Bay Indian Community and its Allotment heirs.

Today almost 70% of KBIC's commercial timberland are overstocked, overmature, or at high risk of decline or disease. This equates to hundreds of thousands of dollars being lost annually in declining and undermanaged timber. The purpose of this plan is to reduce the fluctuation in the commercial timber harvesting program and attempt to capture a good deal of the economic value of KBIC's timber resource. By increasing both the number and size of timber sales each year, KBIC should be able to increase both the health and economic value of their forests. The goal of setting up large multi-unit sales (e.g. Haataja Road Allotments) is to increase acreage and thus the economic potential for the overall sale. This will hopefully increase the number of bids as well as the price/timber product. The goal of small 40acre tribal timber sales is to assist tribal loggers who may need smaller more economically viable operations to maintain or start-up a business. These smaller sales may be broken up into more units of less acreage if needed. The long-term goal of such sales is to give smaller tribal operations the opportunity to build up enough of an economic base that they may be able to increase their overall operation.

As stated previously, this plan does not replace the current KBIC forest management plan. However, in two years the KBIC forest management plan will be outdated (10 years old). In less than five years another harvest plan will need to be created. It would benefit the overall forestry program as well as the health and economic value of timber on the L'Anse reservation if the process of updating the KBIC forest management plan started within the next fiscal year. That way the tribe could have a plan that integrates both a general forest management and a geographically specific timber harvesting plan by 2010.